

Curriculum vitae

Daniel Baron, Ph.D.

date of birth: 25th February 1989 in Krnov, Czech Republic
permanent stay: Fügnerova 16, 794 01 Krnov, Czech Republic

Education:

- 2014-2019 Ph.D. degree in analytical chemistry – Palacký University in Olomouc, Olomouc, Czech Republic, Faculty of Science
Thesis: Nanoparticles in capillary electrophoresis
- 2012-2014 Mgr. degree in analytical chemistry – Palacký University in Olomouc, Olomouc, Czech Republic, Faculty of Science
Thesis: Characterization of nanoobjects via capillary electrophoresis
- 2008-2012 Bc. degree in chemistry – Palacký University in Olomouc, Olomouc, Czech Republic, Faculty of Science
Thesis: Analysis and employment of fluorescent nanoparticles in capillary electrophoresis

Employment:

- 2016-present Scientific worker at the department of Analytical chemistry, Palacký University in Olomouc, Olomouc, Czech Republic

Fields of Interest:

Analytical chemistry, electromigration techniques, on-line preconcentration, analysis and characterization of nanoobjects, micellar electrokinetic chromatography, chiral separations, mass spectrometry, hyphenated techniques – CE-ICP-MS, CE-ESI-MS

Publication activities:

- **Daniel Baron**, Carmen Cacho, Jan Petr, Electrokinetic preconcentration of magnetite core - carboxylic shell nanoparticles by capillary electrophoresis. *Journal of chromatography A*, 1499 (2017).
- **Daniel Baron**, Petra Dolanská, Zdenka Medříková, Radek Zbořil, Jan Petr, Online stacking of carboxylated magnetite core-shell nanoparticles in capillary electrophoresis. *Journal of separation science*, 40 (2017).
- Lenka Hárendarčíková, **Daniel Baron**, Andrea Šebestová, Jan Rozsypal, Jan Petr, True lab-in-a-syringe technology for bioassays. *Talanta*, 174 (2017).
- Martins Rucins, **Daniel Baron**, Aiva Plotniece, Jan Petr, Determination of some hormone antagonists in waste-water samples by micellar electrokinetic chromatography. *Chromatographia*, 81 (2018).
- Andrea Šebestová, **Daniel Baron**, Radka Pechancová, Tomáš Pluháček, Jan Petr, Separation of oxaliplatin enantiomers at attomolar levels by capillary electrophoresis connected with inductively coupled plasma mass spectrometry. *Talanta* 205 (2019).
- **Daniel Baron**, Jan Rozsypal, Aude Michel, Jean-Michel Siaugue, Tomáš Pluháček, Jan Petr, Study of interactions between carboxylic magnetite nanoparticles and polymyxin B by capillary electrophoresis with inductively coupled plasma mass spectrometry. *Journal of Chromatography A*, 1609 (2020).
- Petra Švecová, **Daniel Baron**, Kevin A. Schug, Tomáš Pluháček, Jan Petr, Ultra-trace determination of oxaliplatin impurities by sweeping-MEKC-ICP-MS. Submitted to *Analytica Chimica Acta*.
- Radka Pechancová, Jiří Gallo, **Daniel Baron**, David Milde, Zuzana Slobodová, Karel Lemr, Tomáš Pluháček, Chromium speciation in ex-vivo periprosthetic tissues from patients with failed CoCrMo implants. In preparation.

- Ester Drastíková, Klára Konderlová, Andrea Šebestová, **Daniel Baron**, Petra Švecová, Petra Tábořská, Kateřina Vítková, Veronika Pospíšilová, Serhiy Forostyak, Zdeněk Kořístek, Ludmila Porubová, Jan Petr, Determination of total protein content in biomedical products by the PDMS-assisted lab-in-a-syringe assay using 3D printed scaffolds removal. Submitted to Journal of Analytical Science and Technology.

Teaching:

Seminars (Fundamentals of Data Processing, Chemistry of Water) and Lab courses (Fundamental Analytical Chemistry, Advanced Analytical Chemistry)

Internships:

- 1. 4. – 30. 6. 2015 Teva Czech Industries, TSA QC department (Opava – Komárov, Czech republic)
- 1. 3. – 29. 6. 2016 Latvian Institute of Organic Synthesis (Riga, Latvia)

Research activities:

- Grant Agency of Czech Republic, 16-23938Y, „Characterization of nanoparticles via capillary electrophoresis“.
- Grant Agency of Czech Republic, 19-23033S, „Improvement of detection limits in chiral separations using capillary electrophoresis hyphenated to ESI-MS or ICP-MS“.
- OP PIK, „TFC-X – Characterization, optimalization and validation GMP-grade preparation of new biotechnological drug“, CZ.01.1.02/0.0/0.0/16_084/0010317.
- Internal Grant of Palacký University in Olomouc, IGA_PrF_2015_020, „Matrix effect and its suppression for sample analysis“
- Internal Grant of Palacký University in Olomouc, IGA_PrF_2016_016, „Bioanalysis and analysis of food“.
- Internal Grant of Palacký University in Olomouc, IGA_PrF_2017_020, „Matrix effect and limit of detection“.
- Internal Grant of Palacký University in Olomouc, IGA_PrF_2018_027, „Effective sample preparation with complex matrix“.
- Internal Grant of Palacký University in Olomouc, IGA_PrF_2019_028, „Innovative methods of sample analyses with complex matrix“.

Languages and skills:

English: advanced B2 (writing, speaking, listening, reading)
Driving license holder (from 2008)

Other activities:

Helping with organization of popularization activities and excursions, Opponent of bachelor theses, Research contract – development of CE method and determination of chloride and chlorate anions as impurities in samples of potassium perchlorate for EMS-PATVAG company.